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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,358	10/01/2003	Tsunemi Sugiyama	242578US0	7646

22850 7590 02/08/2007

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EXAMINER	
DOTE, JANIS L	
ART UNIT	**PAPER NUMBER**
1756	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/674,358	SUGIYAMA ET AL.	
	Examiner	Art Unit	
	Janis L. Dote	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on Dec. 14, 2006, has been entered.

2. The examiner acknowledges the amendment to claim 1 filed on Dec. 14, 2006. Claims 1-16 are pending.

3. Applicants again submit that the Lists of "Related Cases" in the Information Disclosure statements filed on Sep. 9, 2004, and on Sep. 23, 2004, were "submitted in a proper manner, since Mr. Nicholas Godici, former Commissioner for Patents, stated on August 4, 2004 that copies of cited pending applications are no longer required. Applicants have satisfied their duty of disclosure by providing this listing to the Examiner. The OG Notice of October 19, 2004 . . . does not state that its effects are not retroactive."

As discussed in the office action mailed on Sep. 14, 2006, paragraph 3, applicants are mistaken. The notice states "[t]his

waiver is effective immediately." (i.e., Oct. 19, 2004.) No private communication could possibly put the policy into effect prior to publication of the notice. The "waiver" attributed to Mr. Godici has no effect, as there is no evidence that the alleged remarks were an official notice to the public at large and to the USPTO.

Accordingly, the US applications listed in the "List of related cases" in the information disclosure statements filed on Sep. 9, 2004, and on Sep. 23, 2004, do not fully comply with the requirements of 37 CFR 1.98 because there are no copies of those portions of the U.S. applications which caused them to be listed present in the instant application.

Applicants are advised that the date of any re-submission of any item of information contained in the information disclosure statements filed on Sep. 9, 2004, and Sep. 24, 2004, or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

4. The rejection of claims 1-16 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on Sep. 14,

2006, paragraph 6, has been withdrawn in response to the amendment to claim 1 filed on Dec. 14, 2006.

The objection to claim 1 set forth in the office action mailed on Sep. 14, 2006, paragraph 7, has been withdrawn in response to the amendment to claim 1 filed on Dec. 14, 2006.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 is indefinite in the phrase "the master batch is prepared by kneading a colorant, a resin, and a pigment dispersant" (emphasis added) because it is not clear whether the recited "a colorant," "a resin," and "a pigment" in claim 16 refers to the colorant, resin, and polymer pigment dispersant recited in claim 1, from which claim 16 depends, or to another colorant, resin, or pigment dispersant.

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-13 and 16 are rejected under 35 U.S.C. 103(a) as unpatentable over WO 02/056116 (Emoto), as evidenced by US 2004/0053155 A1 (US'155), combined with US 6,037,090 (Tanaka). The US published application (US'155), filed under 35 U.S.C. 371, is the national stage of the WO application of Emoto, and therefore is presumed to have been an accurate English-language translation of the WO application of Emoto. See US'155 for cites.

Emoto discloses a toner comprising a binder resin comprising a urea-modified polyester resin and an unmodified polyester resin, copper phthalocyanine blue pigment, and rice wax. US'155, paragraph 0015, and example 1 at paragraphs 0118 through 0129. The toner has a number average particle size (Dn) of 4.8 μm and a volume average particle size (Dv) of 5.5 μm, a ratio of Dv/Dn of 1.15, and an average circularity of 0.94. US'155, Table 2, example 1. The Dn, Dv, and ratio Dv/Dn are within the ranges recited in instant claim 8. The circularity of 0.94 is within the range of 0.94 to 1.00 recited in instant claim 9. The weight ratio of the urea-modified polyester to the unmodified polyester resin is 0.26, which is within the range of

5/95 to 25/75 (i.e., 0.053 to 0.33) recited in instant claim 5. The weight ratio was determined from the information disclosed in example 1. The dispersed pigment in the toner has a number average particle size of 0.4 μm, and comprises 3.5 % by number of particles having a number average particle size of 0.7 μm or more. The average particle size and particle size distribution of the colorant meet the colorant limitations recited in instant claim 4. Emoto discloses that the above toner may be used in a two-component developer comprising a carrier. US'155, paragraph 0116. Emoto discloses a commercially available copier comprising the toner described above. US'155, paragraph 0165. Thus, Emoto discloses a container comprising the toner, as recited in instant claim 13. Emoto discloses an image forming method comprising the steps of charging a photoconductor, exposing the photoconductor to light to form an electrostatic latent image, developing the latent image with a developer, transferring the toner image to a receiving member, e.g., paper, and fixing the toner image to the receiving member. US'155, paragraphs 0002 and 0165.

According to Emoto, the toner provides high quality images excellent in transparency and chroma (brightness, gloss), and has excellent powder fluidity, anti-offset properties, charge stability, and transferability. US'155, paragraph 0012, and

Table 2, example 1.

The toner binder resin has a glass transition temperature (Tg) of 55°C, which is within the range of 40 to 70°C recited in instant claim 7. US'155, Table 1. Emoto does not disclose that its toner has a Tg in the range of 40 to 70°C as recited in instant claim 7. However, because the Emoto toner in example 1 comprises 84 wt% of the binder resin and the binder resin has a Tg of 55°C, it is reasonable to presume that the toner has a Tg within the range recited in instant claim 7. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

The Emoto toner in example 1 is obtained by: (1) preparing an oil phase solution by dissolving a prepolymer comprising isocyanate groups that is capable of forming a urea-modified polyester and the un-modified polyester resin in a solvent, dispersing the colorant, and dispersing or dissolving the rice wax; (2) "pulverizing" the oil phase solution of step (1); (3) dispersing the pulverized oil phase in an aqueous solution comprising a surfactant and inorganic fine particles; (4) adding ketimine compound 1 as the crosslinker and elongation agent to the dispersion of step (3) and reacting ketimine compound 1 with the prepolymer to form the urea-modified polyester; (5) removing the solvent from the mixture of step (4); and (6) washing the

mixture of step (5) to obtain toner particles. See US'155, example 1.

Emoto does not exemplify the use of an aqueous solution comprising resin fine particles as recited in instant claim 1. However, Emoto teaches that the aqueous solution may comprise, as a dispersing agent, polymer fine particles which are insoluble or hardly soluble in water. US'155, paragraph 0102. According to Emoto, the use of polymer fine particles provides toner particles having a sharp particle size distribution. US'155, paragraphs 0095 and 0103. Emoto teaches that the volume average particle size of the polymer fine particles is controlled to obtain a toner having a desired particle size. According to Emoto, when a toner having a volume average particle size of 5 μm is desired, the volume average particle size of the polymer fine particles ranges from 0.0025 to 1.5 μm, preferably in the range of 0.005 to 1.0 μm (i.e., 5 to 1000 nm). US'155, paragraph 0104. As discussed above, the volume average particle size of the toner in example 1 of Emoto is 5.5 μm. The range of 5 to 1000 nm overlaps the range of 5 to 500 nm recited in instant claim 10. Because the prior art recognizes that the volume average particle size of the polymer fine particles is a result-effective variable, its variation is presumably within the skill of the ordinary worker in the art.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Emoto, to use an aqueous solution comprising, as a dispersing agent, polymer fine particles, as taught by Emoto, where the polymer fine particles have a volume average particle size that is within the particle size range recited in instant claim 10, as the aqueous dispersion solution in the method disclosed in example 1 of Emoto. That person would have had a reasonable expectation of successfully obtaining a toner having the desired volume average particle size of 5.5 μm, the ratio of Dv/Dn of 1.15, and the properties disclosed by Emoto.

Emoto does not disclose the use of a polymeric pigment dispersant or a pigment dispersion auxiliary agent as recited in instant claims 1 and 3, respectively.

Tanaka teaches forming a pigment dispersion solution by mixing 20 parts by weight of a pigment, 4 parts by weight of a polymer dispersant having particular acid and amine values, e.g., a "polyester amide amine salt" having a particular acid and amine values of example 1, and 1 part by weight of a pigment dispersant SOLSPERSE 5000 in 75 parts by weight of the solvent ethyl acetate; and dissolving or dispersing the mixture. Col. 12, lines 28-38. Tanaka further teaches that its polymer dispersant can equally be a polycaprolactone modified with

diisocyanate or with a silane coupling agent having amino groups. Col. 7, lines 32-35. According to Tanaka, the polycaprolactone can be a graft copolymer or a block copolymer of ε-caprolactone and another monomer. Col. 7, line 65, to col. 8, line 4. Tanaka teaches that the other monomer can be vinyl chloride, vinyl acetate, acrylic esters, or methacrylic esters. The modified polycaprolactone graft copolymer or block copolymer of ε-caprolactone and another monomer, such as those described above, meets the polymer dispersant "acrylic resins . . . polyester(meth)acrylate . . . polyvinylacetate . . . polystyrene . . . polyvinylchloride . . . copolymers of (meth)acrylate esters" recited in instant claim 1. The "polyester amide amine salt" amount of 20 wt% based on the weight of the pigment in example 1 is within the range of 1 to 30 wt% based on the weight of the colorant recited in instant claim 2. Tanaka teaches that the resulting pigment dispersion solution may be used in a "so-called" dissolution suspension process for making a toner comprising the steps of: dissolving or dispersing into an organic solvent the binder resin and the pigment dispersion solution to prepare an oily phase, and dispersing the oily phase in an aqueous solution to form toner particles. Col. 3, line 65, to col. 4, line 9, and example 1 at col. 12. The steps in the dissolution suspension process

disclosed by Tanaka are similar to steps disclosed in the method of Emoto. According to Tanaka, the use of the dispersant polymer having said particular acid value improves the dispersibility and dispersion stability of the pigment. Col. 3, lines 30-35. The color developability of the toner and light transmittance through OHP (overhead projection) transparencies are said to be improved. The pigment is said to be stably dispersed in the toner for a long time. Col. 4, lines 51-58. Tanaka further discloses that the fine particles of the pigment are uniformly dispersed in the toner particles and the amount of the pigment appearing on the surface of the toner particles is reduced "because of the difference in affinity between the colorant and the oil phase components, and between the colorant and the aqueous solution." Col. 4, lines 59-67.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Tanaka, to use the pigment dispersion solution as taught by Tanaka, comprising the dispersant polycaprolactone modified with diisocyanate or with a silane coupling agent having amino groups, where the polycaprolactone is a graft copolymer or a block copolymer of ε-caprolactone and of either vinyl chloride, vinyl acetate, an acrylic ester, or a methacrylic ester, in the amount of 20 wt% based on the amount of the pigment, the pigment dispersant

SOLSPERSE, and the copper blue phthalocyanine pigment in the step of forming the oil phase in the method of making a toner rendered obvious over the teachings in Emoto. That person would have had a reasonable expectation of successfully obtaining a toner and an image forming method using said toner that provide images with improved color developability and light transmittance through OHP transparencies, wherein the pigment is stably dispersed in the toner for a long time.

Instant claims 1-13 and 16 are written in product-by-process format. The combined teachings of Emoto and Tanaka do not make a toner by the process recited in the instant claims. However, as discussed above, the toner rendered obvious over the combined teachings of Emoto and Tanaka meets the compositional limitations recited in the instant claims. Thus, it appears that the toner is the same or substantially the same as the toners made by the process recited in the instant claims. The burden is on applicants to prove otherwise. In re Marosi, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985). MPEP 2113.

9. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,430,526 (Ohkubo) combined with Emoto, as evidenced by US'155, and Tanaka. For the reasons

discussed in paragraph 8 above, see US'155, the translation of Emoto, for cites.

Ohkubo discloses an electrophotographic image forming apparatus comprising all the components recited in instant claim 14, but for the particular toner. Fig. 1 and col. 2, line 56, to col. 3, line 57. The apparatus shown in Fig. 1 comprises an electrophotographic photosensitive drum **3**, a contact charging member **4**, an exposure unit that comprises a laser beam **L**, a developing unit **5**, a transfer unit **7**, and a fixing unit **17**. Ohkubo also discloses a process cartridge that comprises all the components recited in instant claim 15, but for the particular toner. Fig. 2 and col. 3, line 65, to col. 4, line 8. The process cartridge shown in Fig. 2 comprises the photosensitive drum **3**, a charging roller **4**, a developing device **5**, and cleaning unit **8**. Ohkubo teaches that the process cartridge is attachably mounted or detachably mountable as a unit relative to the image forming apparatus. Col. 3, lines 63-65.

Ohkubo does not exemplify the particular toner recited in the instant claims. However, Ohkubo does not limit the type of toner used.

Emoto, as evidenced by US'155, combined with Tanaka, renders obvious a toner as described in paragraph 8 above, which

is incorporated herein by reference. For the reasons discussed in paragraph 8 above, that toner meets the compositional limitations recited in instant claims 14 and 15. As discussed in paragraph 8, Emoto teaches that its toner provides high quality images excellent in transparency and chroma (brightness, gloss), and has excellent powder fluidity, anti-offset properties, charge stability, and transferability. As discussed in paragraph 8 above, Tanaka teaches the benefits of using its dispersant polymer having said particular acid value in forming a toner pigment dispersion, for example, to improve the dispersibility and dispersion stability of the pigment, such that the color developability of the toner and light transmittance through OHP (overhead projection) transparencies are said to be improved.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings in Emoto and Tanaka, to use the toner rendered obvious over the combined teachings of Emoto, as evidenced by US'155, and Tanaka, as the toner in the image forming apparatus and the process cartridge disclosed by Ohkubo. That person would have had a reasonable expectation of successfully providing an electrophotographic image forming apparatus and a process cartridge that provide high quality images that are excellent in transparency and chroma

(brightness, gloss) as taught by Emoto and that also have improved color developability and light transmittance through OHP transparencies as taught by Tanaka.

10. Applicants' arguments filed on Dec. 14, 2006, as applicable to the rejections over Emoto in paragraphs 8 and 9 above have been fully considered but they are not persuasive.

Applicants assert that one skilled in the art would not have combined Emoto and Tanaka without the present disclosure as a guide. Applicants further assert that "even if combined, the result would not be the presently-claimed invention," since Tanaka et al. neither teaches or suggests any of presently-claimed polymer dispersants.

Applicants' assertion is not persuasive. The recitation of a "colorant master batch" is a product-by-process limitation. The claims merely recite forming a composition comprising a colorant, a resin, and a pigment polymer dispersant. As discussed in paragraph 8, contrary to applicants' assertion Tanaka teaches pigment polymer dispersants that meet the compositional limitations of a number of the dispersant Markush members recited in instant claim 1, e.g., polycaprolactones modified with diisocyanate or with a silane coupling agent having amino groups, where the polycaprolactones are graft

copolymers or block copolymers of ε-caprolactone and either vinyl chloride, vinyl acetate, an acrylic ester, or a methacrylic ester. Thus, for the reasons discussed in paragraph 8 above, the combined teachings of Emoto and Tanaka render obvious a toner that meets the compositional limitations recited in the instant claims. Accordingly, it appears that the toner is the same or substantially the same as the toners made by the process recited in the instant claims. Applicants have not provided any objective evidence showing otherwise.

Furthermore, applicants' assertion that the examiner's conclusion of obviousness is based upon improper hindsight reasoning is not persuasive. It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Moreover, as discussed in paragraph 8, Tanaka provides reason, motivation, and suggestion to a person having ordinary skill in the art to use its pigment dispersion solution comprising the Tanaka polycaprolactone dispersant having the

particular acid number and amine number, the pigment dispersant SOLSPERSE, and pigment. In particular, according to Tanaka, the use of the dispersant polymer having said particular acid value improves the dispersibility and dispersion stability of the pigment. The color developability of the toner and light transmittance through OHP (overhead projection) transparencies are said to be improved. The pigment is said to be stably dispersed in the toner for a long time. The fine particles of the pigment are uniformly dispersed in the toner particles and the amount of the pigment appearing on the surface of the toner particles is reduced "because of the difference in affinity between the colorant and the oil phase components, and between the colorant and the aqueous solution."

Accordingly, for the reasons discussed in the rejections in paragraphs 8 and 9, the combined teachings of the cited prior art render obvious the subject matter recited in the instant claims. Thus, the rejections in paragraphs 8 and 9 stand.

11. Claims 1-13 and 16 are rejected under 35 U.S.C. 103(a) as unpatentable over Emoto, as evidenced by US'155, combined with Japanese Patent 11-231572 (JP'572). See the Japanese Patent Office (JPO) machine-assisted translation of JP'572 for cites.

For the reasons discussed in paragraph 8 above, see US'155, the translation of Emoto, for cites.

Emoto discloses a toner comprising a binder resin comprising a urea-modified polyester resin and an unmodified polyester resin, a copper phthalocyanine blue pigment, and rice wax. Emoto further discloses a toner container comprising the toner and image forming method using said toner. The discussion of Emoto in paragraph 8 above is incorporated herein by reference.

As discussed in paragraph 8, the Emoto toner in example 1 is obtained by: (1) preparing an oil phase solution by dissolving a prepolymer comprising isocyanate groups that is capable of forming a urea-modified polyester and the un-modified polyester resin in a solvent, dispersing the colorant, and dispersing or dissolving the rice wax; (2) "pulverizing" the oil phase solution of step (1); (3) dispersing the pulverized oil phase in an aqueous solution comprising a surfactant and inorganic fine particles; (4) adding ketimine compound 1 as the crosslinker and elongation agent to the dispersion of step (3) and reacting ketimine compound 1 with the prepolymer to form the urea-modified polyester; (5) removing the solvent from the mixture of step (4); and (6) washing the mixture of step (5) to obtain toner particles. See US'155, example 1.

Emoto does not exemplify the use of an aqueous solution comprising resin fine particles as recited in instant claim 1. However, Emoto teaches that the aqueous solution may comprise, as a dispersing agent, polymer fine particles, which are insoluble or hardly soluble in water. US'155, paragraph 0102. According to Emoto, the use of polymer fine particles provides toner particles having a sharp particle size distribution. US'155, paragraph 0095 and 0103. Emoto teaches that the volume average particle size of the polymer fine particles is controlled to obtain a toner having a desired particle size. According to Emoto, when a toner having a volume average particle size of 5 μm is desired, the volume average particle size of the polymer fine particles ranges from 0.0025 to 1.5 μm, preferably in the range of 0.005 to 1.0 μm (i.e., 5 to 1000 nm). US'155, paragraph 0104. As discussed above, the volume average particle size of the toner in example 1 of Emoto is 5.5 μm. The range of 5 to 1000 nm overlaps the range of 5 to 500 nm recited in instant claim 10. Because the prior art recognizes that the volume average particle size of the polymer fine particles is a result-effective variable, its variation is presumably within the skill of the ordinary worker in the art.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Emoto, to use an

aqueous solution comprising, as a dispersing agent, polymer fine particles, as taught by Emoto, where the polymer fine particles have a volume average particle size that is within the particle size range recited in instant claim 10, as the aqueous dispersion solution in the method disclosed in example 1 of Emoto. That person would have had a reasonable expectation of successfully obtaining a toner having the desired volume average particle size of 5.5 μm, the ratio of Dv/Dn of 1.15, and the properties disclosed by Emoto.

Emoto does not disclose the use of a polymeric pigment dispersant or a pigment dispersion auxiliary agent as recited in instant claims 1 and 3, respectively.

JP'572 teaches forming a pigment dispersion solution by mixing 88 parts by weight of the cyanogen pigment C.I. pigment blue 15:3, 10 parts by weight of a "macromolecule dispersant," such as a polycaprolactone, and 2 parts by weight of the "synergist" 1-aminoanthraquinone-2-carboxylic acid in 100 parts by weight of the solvent ethyl acetate; and dissolving or dispersing the mixture. Translation, paragraph 0051, lines 1-12, and paragraph 0057. JP'572 further teaches that its "macromolecule" dispersant can be a well-known macromolecule dispersant, such as all of the particular polymer dispersants listed in the Markush group recited in instant claim 1, e.g.,

acrylic resin, an unsaturated polyester resin, chlorinated polyethylene, a copolymer of styrene and maleic anhydride or their half esters, etc. The "macromolecule dispersant" amount of 11 wt% based on the weight of the pigment is within the range of 1 to 30 wt% based on the weight of the colorant recited in instant claim 2.

JP'572 does not identify the "synergist" as a pigment dispersant auxiliary agent as recited in instant claim 3. However, JP'572 teaches that the "synergist" has a strong interaction with the "macromolecule" dispersant as well as with the pigment. According to JP'572, the "synergist" aids in the reaction between the pigment and the "macromolecule" dispersant to improve the dispersibility of the pigment in the toner binder resin. Translation, paragraph 0009. Thus, based on the teachings in JP'572, it is reasonable to presume that the JP'572 "synergist" has the characteristics of a pigment dispersant auxiliary agent as recited in instant claim 3. The burden is on applicants to prove otherwise. Fitzgerald, supra.

JP'572 teaches that the resulting pigment dispersion solution may be used in a "so-called" dissolution suspension process for making a toner comprising the steps of: dissolving or dispersing into an organic solvent the binder resin and the pigment dispersion solution to prepare an oily phase, and

dispersing the oily phase in an aqueous solution to form toner particles. Translation, paragraphs 0029-0036, and example 1 in paragraphs 0051-0055. The steps in the dissolution suspension process disclosed by JP'572 are similar to steps disclosed in the method of Emoto. According to JP'572, the use of its "synergist" combined with the "macromolecule" dispersant improves the dispersibility and dispersion stability of the pigment in the toner binder resin. Translation, paragraphs 0006 and 0089. JP'572 also teaches that the dispersibility of the pigment in the toner is good. The toner has excellent transparency and color forming ability. Paragraphs 0006 and 0089.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'572, to use the pigment dispersion solution as taught by JP'572, comprising the "macromolecule dispersant" that meets the polymer dispersant recited in instant claim 1 in the amount of 11 wt% based on the amount of the pigment, the JP'572 "synergist," and the copper blue phthalocyanine pigment in the step of forming the oil phase in the method of making a toner rendered obvious over the teachings in Emoto. That person would have had a reasonable expectation of successfully obtaining a toner and an image forming method using said toner that provide images with

improved color and transparency, wherein the pigment is stably dispersed in the toner particles.

Instant claims 1-13 and 16 are written in product-by-process format. The combined teachings of Emoto and JP'572 do not make a toner by the process recited in the instant claims. However, as discussed above, the toner rendered obvious over the combined teachings of Emoto and JP'572 meets the compositional limitations recited in the instant claims. Thus, it appears that the toner is the same or substantially the same as the toners made by the process recited in the instant claims. The burden is on applicants to prove otherwise. Marosi, supra; Thorpe, supra. MPEP 2113.

12. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkubo combined with Emoto, as evidenced by US'155, and JP'572. See the JPO translation of JP'572 for cites. For the reasons discussed in paragraph 8 above, see US'155, the translation of Emoto, for cites.

Ohkubo discloses an electrophotographic image forming apparatus and a process cartridge as described in paragraph 9 above, which is incorporated herein by reference. As discussed in paragraph 9, the apparatus and process cartridge comprise all

of the components recited in instant claims 14 and 15, respectively, but for the particular toner.

Ohkubo does not exemplify the particular toner recited in the instant claims. However, Ohkubo does not limit the type of toner used.

Emoto, as evidenced by US'155, combined with JP'572, renders obvious a toner as described in paragraph 11 above, which is incorporated herein by reference. For the reasons discussed in paragraph 11 above, that toner meets the compositional limitations recited in instant claims 14 and 15. As discussed in paragraph 11, Emoto teaches that its toner provides high quality images excellent in transparency and chroma (brightness, gloss), and has excellent powder fluidity, anti-offset properties, charge stability, and transferability. As discussed in paragraph 11 above, JP'572 teaches the benefits of using its "synergist" in combination with a "macromolecule" dispersant in forming a toner pigment dispersion, for example, to improve the dispersibility and dispersion stability of the pigment, such that the color forming ability of the toner and light transparency are said to be improved.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings in Emoto and JP'572, to use the toner rendered obvious over the combined teachings of

Emoto, as evidenced by US'155, and JP'572, as the toner in the image forming apparatus and the process cartridge disclosed by Ohkubo. That person would have had a reasonable expectation of successfully providing an electrophotographic image forming apparatus and a process cartridge that provide high quality images that are excellent in transparency and chroma (brightness, gloss) as taught by Emoto and that also have improved color forming ability as taught by JP'572.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JANIS L. DOTE
PRIMARY EXAMINER
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JLD
Feb. 3, 2007